

Title (en)

Process for manufacture of trench DRAM capacitor

Title (de)

Verfahren zur Herstellung eines DRAM-Grabenkondensators

Title (fr)

Procédé de manufacture d'un condensateur DRAM ensillonné

Publication

EP 1073115 A3 20040804 (EN)

Application

EP 00306332 A 20000725

Priority

US 35474399 A 19990729

Abstract (en)

[origin: EP1073115A2] A process for manufacturing a deep trench capacitor in a trench (10). The capacitor comprises a collar (18) in an upper region of the trench and a buried plate (26) in a lower region of the trench. The improvement comprises, before forming the collar in the trench upper region, filling the trench lower region with a non-photosensitive underfill material (16) such as spin-on-glass. The process may comprise the steps of (a) forming a deep trench in a substrate; (b) filling the trench lower region with an underfill material; (c) forming a collar in the trench upper region; (d) removing the underfill; and (e) forming a buried plate in the trench lower region. <IMAGE>

IPC 1-7

H01L 21/8242

IPC 8 full level

H01L 21/76 (2006.01); **H01L 21/8242** (2006.01); **H01L 27/108** (2006.01)

CPC (source: EP KR US)

H01L 21/76 (2013.01 - KR); **H10B 12/0387** (2023.02 - EP US)

Citation (search report)

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- [A] PATENT ABSTRACTS OF JAPAN vol. 013, no. 429 (E - 823) 25 September 1989 (1989-09-25)

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Designated contracting state (EPC)

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EP 1073115 A2 20010131; **EP 1073115 A3 20040804**; CN 1127130 C 20031105; CN 1285616 A 20010228; HK 1032292 A1 20010713; JP 2001044384 A 20010216; JP 3738958 B2 20060125; KR 100753428 B1 20070831; KR 20010015458 A 20010226; TW 462130 B 20011101; US 6271142 B1 20010807

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EP 00306332 A 20000725; CN 00120189 A 20000720; HK 01102673 A 20010417; JP 2000220682 A 20000721; KR 20000043609 A 20000728; TW 89107848 A 20000426; US 35474399 A 19990729